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09/176,374 10/21/98 TAKEUCHI

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EXAMINER

IM62/0315

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ART UNIT

PAPER NUMBER

1745

DATE MAILED:

03/15/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/176,374

Applicant(s)

Takeuchi

Examiner

Tracy Dove

Group Art Unit

1745

☒ Responsive to communication(s) filed on 21 Oct 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-19 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-19 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1745

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

✓ Claims 1 and 11-13 state "a jellyroll type configuration". It is well known in the art what a jellyroll configuration represents and Examiner suggests deleting "type" to overcome the rejection.

Art Unit: 1745

✓ Claims 5, 8 and 16 state that the sub-assembly is formed to have a curved surface, but the claims contain no method step on how the curved surface is formed. Furthermore, if the electrode assembly is in a jellyroll configuration it will inherently have a curved surface. Therefore the subject dependent claims do not further limit their respective independent claims.

✓ Claim 19 states "in combination with an implantable cardiac defibrillator". Examiner suggest amending the claim to state "A cell according to claim 13, for an implantable cardiac defibrillator".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida et al. 4,709,472.

Machida et al. teaches a method of manufacturing a spiral electrode assembly with a portion consisting of a separator only wound in a first step of the winding operation. This eliminates winding of a portion of one of the electrode members, which frequently results in a short-circuit. The first electrode is wound prior to winding of the second electrode, so that, even

Art Unit: 1745

when the separator may be damaged by the sharp corners of the electrode members, the absence of the other electrode member in the area opposite the sharp corners will prevent a short-circuit. One of the electrode members or the negative electrode member is covered on at least its both surfaces with the separator. Note col. 5, line 62-col. 6, line 17. Figure 6 shows that one electrode is longer and that the longer electrode is wound around the mandrel separately before winding of the second electrode. The electrode assembly conforms to the curved wall of the cell, as shown in Figure 8. Lithium can be used to form an electrode member. See col. 3, lines 8-10.

Thus the claims are anticipated.

Claims 1-5, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Binder et al. 3,298,871.

Binder et al. teaches a cell including an electrode (e.g. negative electrode) having a greater length, a shorter electrode (e.g. positive) and two separator layers which may be constituted by a single separator band folded around the shortest electrode. A casing surrounds the roll of electrodes (curved surface conforms to casing). In order to wind the electrodes of opposite polarity and their interposed separator or separators together into a spiral roll, the end of one of the electrode bands, e.g. the negative, is inserted into a slot of the mandrel. Then the mandrel is rotated for about one turn in order to maintain the end of the electrode band in the slot. Then, the second electrode, e.g. positive, may be placed over the mandrel-mounted negative electrode band. The winding of the two electrode bands and interposed separator are formed into a spiral roll. Note col. 1, lines 34-54; col. 4, lines 3-10.

Art Unit: 1745

Thus the claims are anticipated.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida et al. 4,709,472, as applied above, in view of Takeuchi et al. 5,549,717.

Machida does not teach the anode, cathode or separator being provided with a plurality of scallops along one edge. Machida does not teach placing the electrode assembly in a cell casing of prismatic shape and attaching leads for electrically connecting the cell. Machida does not teach the electrode assembly for an implantable cardiac defibrillator.

However, Takeuchi et al. discloses a solid cathode liquid organic electrolyte alkali metal high rate cell having a anode-cathode sub-assembly that is placed in a cell casing of prismatic shape having opposed flat faces, a lead of either the anode or cathode is attached to the cell casing depending upon whether case positive or case negative electrical configuration is desired and a lead of the other of the anode or cathode is connected to an electrical connector means extending through the casing in an insulated manner. Liquid electrolyte is introduced to the anode-cathode sub-assembly in the casing whereupon the casing then is sealed closed. A cell

Art Unit: 1745

containing the anode-cathode sub-assembly may be for operating an implantable cardiac defibrillator. Figures 16-18 show the anode, cathode and separator having a plurality of scallops along one edge. Note col. 1, line 10; col. 1, line 59-col. 2, line 2; col. 7, line 66-col. 8, line 3; col. 8, lines 16-17; and col. 8, lines 30-33.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the wound electrode assembly of Machida for the wound electrode assembly of Takeuchi because both electrode assemblies are used in cells containing wound electrodes. The electrode assemblies of Machida and the instant invention are quite similar, with the difference being what appears to be the inventive concept of the instant invention, that of winding one electrode before the other in order to prevent a short. The Machida reference teaches this concept and shows it is known in the art. Therefore it would have been obvious to modify Takeuchi because the concept of winding one electrode before the other to prevent a short is known in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. My supervisor M. Nuzzolillo can be reached at (703) 308-3776. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax number is (703) 305-3599.

**Maria Nuzzolillo**  
**Supervisory Patent Examiner**  
**Technology Center 1700**

March 11, 2000

A handwritten signature in black ink, appearing to be 'Maria Nuzzolillo', written over a horizontal line.